

Use of Networks of Field-Deployed Precision Miniaturized 2 December 2025 Gravitometers for Submarine Detection

5 December 2025

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Introduction

Although gravimeters have many applications, a sufficiently precise and low-cost network of gravimeters would allow for any large-hulled submarine to be detected regardless of whether it has a detectable magnetic or acoustic signature.

Abstract

The degree of sensitivity of the 2 December 2025 gravimeter mechanism and its reduced size and cost opens the possibility of deploying the shoebox-sized devices on the ocean's floor and surface in order to allow for even the most silent submarines to be detected.

Space-based energetic detection methods including ground-penetrating RADAR and even magnetic methods which involve overflights using "stacked" aircraft looking for negative discrepancies in the Earth's magnetic field with EM noise being accounted for have limitations.

The gravitational effects of large-hulled ships on precision gravimeters is, for all intents and purposes, impossible to hide. Thus, a sufficiently sensitive gravimeter introduces the real possibility of a functionally omniscient submarine detection system. Although many navies are moving toward the use of greater numbers of smaller submarines, the advanced gravimeters described in the recent relevant publication would be sufficiently sensitive to detect even those submarines. In fact, the sensitivity would be so great that a network of sensors based upon these devices would be capable of measuring the mass of a passing ship in order to determine if its haul matches its claimed haul and whether a drone submarine may be hitching a ride on a commercial vessel with or without its awareness by magnetically affixing itself to the underside of the ship in order to hide from space-based sensors.

Conclusion

Plentiful, low-cost, miniaturized gravimeters of this new class would be provide a decisive advantage in the maritime domain.